

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re the Application of: Hiroshi KURACHI, Yuichi SASAKI and Takeya MIYASHITA

Serial No.: 10/807,859

Group Art Unit: 1795

Filed: March 24, 2004

Examiner: Matthew J. Merklings

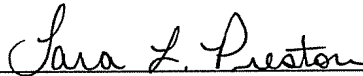
Conf. No.: 5516

For: GAS SENSOR

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**CERTIFICATION OF EFS  
TRANSMISSION**

I hereby certify that this paper is being transmitted via EFS to the Patent and Trademark Office on February 9, 2009.



Tara L. Preston

**REQUEST FOR RECONSIDERATION**

Sir:

In response to the Office Action mailed October 9, 2008, Applicants respectfully request reconsideration and withdrawal of the rejections of record based on the following arguments. Claims 1-3 and 6-11 are pending herein.

Claims 1-3 and 6-11 were rejected under §103(a) over Kato '181 in view of Yamada, Sugiyama and Kato '335. This rejection is respectfully traversed.

In the Amendment filed February 14, 2008, claim 1 was amended to clarify, among other things, that the projected position of the end of the heater on the upper

surface of the sensor element extends only to a starting end of the first space on the upper surface of the sensor element.

Claim 1 is distinguishable from the cited references for at least the following reasons.

First, the PTO mischaracterizes Fig. 1 of Kato '335 as "placing the beginning of the heater coincident with a starting end of a measuring space" (Office Action at page 5). The heater 94 in Fig. 1 of Kato '335 is actually positioned directly below and within the area of the inner pumping electrode 62, and, therefore, the heating element is actually positioned well within the first space, not coincident with the starting end of the first space as asserted by the PTO. Thus, placing the beginning of the heater coincident with a starting end of the measuring space, as presently claimed, is neither disclosed nor suggested by Kato '335.

Second, Sugiyama, which the PTO relies upon for showing that the heater placement is a result-effective variable (Office Action at page 5), actually discloses that the minimum distance from the end of the heater element to the end of the sensor of 1.0 mm is advantageous only because it decreases the difference in the temperature or thermal expansion between the heating element and the adjacent portion of the heater substrate to ensure a desired crack resistance and enable the temperature of the heating element to be elevated to a higher value to allow the gas sensor element to be activated more quickly after power is supplied (Sugiyama, column 2, lines 32-39 and column 6, lines 27-34). Sugiyama further discloses that if the minimum distance is less than 1.0 mm, it is impossible to ensure the desired electric insulation between the

heating element and the heater substrate (column 6, lines 35-39). Applicants respectfully submit that the heater 80 in Kato '181\* is already positioned far enough away from the end of the sensor element to satisfy the requirements of Sugiyama. One skilled in the art would have had no reason to expect that moving the heater 80 of Kato '181 back away from the tip of the sensor element any further than already depicted in Kato '181 would have any additional effect.

Further, there is nothing in the record supporting the PTO's assertion that if the heater in Kato '181 were moved back in accordance with the teachings of Sugiyama that the heater would be placed coincident with the starting end of the measurement space, as presently claimed. This is pure speculation by the PTO using hindsight reconstruction to pick and choose among isolated elements disclosed in cited prior art references simply in an attempt to satisfy all of the claim elements, which is impermissible under U.S. patent law.

It is clear from the foregoing that one skilled in the art would have had no reason to combine Sugiyama with Kato '181, and that Kato '335 fails to correct that defect in the PTO's current rejection. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw this rejection.

For at least the foregoing reasons, Applicants respectfully submit that all pending claims herein are in condition for allowance. Accordingly, the Examiner is requested to issue a Notice of Allowance for this application in due course.

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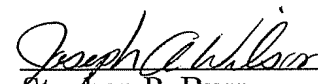
\* It is noteworthy that Kato '181 (and Kato '335) are both owned by the same assignee as that of the present application.

If the Examiner believes that contact with Applicants' attorney would be advantageous toward the disposition of this case, the Examiner is herein requested to call Applicants' attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,

February 9, 2009  
Date

  
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